(b) whether Government proposes to deploy radars in Paradip, Gopalpur, Sambalpur and Balasore and other centres in Orissa State to provide weather information;

(c) if so, the details thereof;

(d) the total number of automatic weather stations/automatic rain gauge stations and other infrastructure that would be set up on Orissa to pre-warm the people about the impending dangers in the sea; and

(e) the time-frame within which the above infrastructure would be fully installed and made functional to help the people of Orissa to reap its benefit?

THE MINISTER OF EARTH SCIENCES (SHRI KAPIL SIBAL): (a) Yes, Sir. There is a proposal to launch a dedicated TV channel to provide weather information.

(b) Yes, Sir. IMD proposes to install Doppler Weather Radars (DWR) at Paradip, Gopalpur, Sambalpur and Balasore.

(c) DWR at Paradip is expected to be installed in 2010 and installation at other places of Orissa will be considered during 2nd phase of the IMDs modernisation programme.

(d) and (e) Seven (7) Automatic Weather Stations(AWS) are already functional in Orissa. In addition, 45 AWS and 173 Automatic Rain Gauge (ARG) stations are to be installed within a year.

Danger of Catalysmic floods to Mumbai and Kolkata

1754. SHRI B.J. PANDA:
MS. MABEL REBELLO:

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether it is a fact that a study report of a Paris-based NGOs, OECD, has warned that the two mega metropolis Mumbai and Kolkata will face the danger of being submerged under cataclysmic floods;

(b) whether Government has identified the towns and cities in various States which are vulnerable to climate change and would be exposed to coastal flooding by storm surge and damage from high winds; and

(c) if so, the details thereof, *inter-alia* indicating the towns/cities in Orissa State that are vulnerable to such flooding with an action plan of the Government to address this issue?

THE MINISTER OF EARTH SCIENCES (SHRI KAPIL SIBAL): (a) Yes, Sir. The Government is aware of the study by the Organisation Economic Cooperation and Development (OECD). This global screening study makes a first estimate of the exposure of the world's large port cities to coastal flooding due to storm surge and damage due to high winds that includes Mumbai and Kolkata among 10 major cities of the world. This study also investigates how climate change is likely to impact each port city's exposure to coastal flooding by the 2070's, alongside subsidence and population growth and urbanisation.

(b) and (c) (i) Under National Action Plan on Climate Change (NAPCC) of the Government, specific action plans for the regional climate change impacts over India are to be launched in which these specific aspects are being considered for evolving climate change impact scenarios.

(ii) National Disaster Management Authority (NDMA) has currently undertaken national and regional level consultations for formulating Management of Guidelines for Urban Floods including the climate change impacts over urban environments. Formulation of guidelines for the Management of Urban Floods by NDMA will enable development of suitable national and state level action plans.

Expansion of the National Centre for Ocean Information Service

1755. SHRI RUDRA NARAYAN PANY:
SHRI B.J. PANDA:

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether it is a fact that the Indian National Centre for Ocean Information Service (INCOIS) is expanding its arms in providing upto date information on predicting storms, optimizing fishing time, earthquakes, tsunami *etc.*;

(b) if so, the details thereof;

(c) the details of centres that have been set up on the Orissa coast to pre-warm both coastal population and the fishermen about the impending dangers to the sea; and

(d) the details of other countries which are being serviced by the above unit?

THE MINISTER OF EARTH SCIENCES (SHRI KAPIL SIBAL): (a) Yes, Sir.

(b) The Tsunami Early Warning Centre set up at INCOIS Hyderabad, is being expanded to provide information on storm surges also, Currently, INCOIS provides information on Potential Fishing Zone (PFZ), and Ocean State advisories and Tsunami Early warnings. The PFZ advisories are being provided thrice a week during the non-ban period for the coastal fisherman community using a wide range of media whereas the tsunami advisories are issued on 24 × 7 basis.

(c) Towards providing the advisory services, a set of 10 Electronic Display Boards have been established along the coast of Orissa one each at Bahabalpur, Chudamani, Kharanasi, Talachuan, Paradeep, Astaranga, Penthakotta, Arjipalli, New Golabandha and Balaramgadi.

(d) The INCOIS has been recognized as Regional Tsunami Watch Provider (RTWP) for the Indian Ocean region. The INCOIS has signed Memorandum of Understanding with the Asian Disaster Preparedness Centre (ADPC) and in the process of signing with other countries such as Maldives, Mauritius and Thailand for providing Tsunami advisories.

Six-in-house projects of National Institute of Ocean Technology

1756. SHRI VIJAY JAWAHARLAL DARDA:
SHRIMATI SYEDA ANWARA TAIMUR:

Will the Minister of EARTH SCIENCES be pleased to state: